

ABSTRACT

Background and Objectives:

The word "hernia" in Latin means "rupture" of a portion of structure. This word in Greek means "bud". Hernia by definition is the abnormal protrusion of any viscera or peritoneum lined sac outside of its normal containing cavity through some natural or unnatural opening. Fundamentally, all sites of herniation possess one feature in common i.e. the zone of weakness where structures pass from or to the abdominal cavity or where interstices occur between musculoaponeurotic bands of surrounding trilaminar wall. All the hernias in groin begin within a single weak area called myopectineal orifice. Lack of the evolutionary development of a strong posterior rectus sheath and transversalis fascia in lower abdomen is thought to represent a significant specific anatomic defect in the evolution of humankind. Various contributing and precipitating factors like chronic constipation, chronic cough, senile enlargement of prostate (all increasing intra-abdominal pressure) and obesity. The lowness of pubic tubercle is associated with narrow origin of internal oblique muscle from lateral inguinal ligament. The narrow origin of internal oblique muscle fails to protect the deep ring and consequently indirect inguinal herniation occurs. The present study is a Prospective study done to evaluate the role of low lying pubic tubercle in the development of inguinal hernia.

Methods :

This study is a prospective study conducted at Madras medical college and Rajiv Gandhi Government General Hospital on a total of 150 patients under the topic “ **A STUDY ON ANTHROPOMETRY OF PUBIC TUBERCLE & ITS CLINICAL IMPLICATIONS**” are taken up for study with the help of relevant history and clinical examination for a period of 8 months starting from February 2017 to September 2017. A total of 75 cases and 75 controls were included in the study. Any case of Inguinal Hernia more than 18years of age irrespective of sex and occupation were included in Cases group. Volunteers of similar age group who do not have inguinal hernia were included in Controls group. The study subjects were asked to lie in supine relaxed position on hard bed. Keeping both their lower limbs straight, so that both the anterior superior iliac spine were at the same level. A line was drawn on the anterior abdominal wall. Connecting both anterior superior iliac spine which was given the name SS Line and the length of SS Line was noted; next the pubic tubercle on the side of hernia was marked by the palpation. Then vertical distance between this point and the SS Line was measured in centimeters. This line was designated as ST line. Similar measurement was done on controls as well. The data collected were entered into Microsoft Office Excel 2013. The collected data were analysed with IBM.SPSS statistics software 23.0 Version.

Results :

All cases studied were males. The mean age of cases was 49yrs whereas controls was 45 yrs. The mean Height of cases and controls were 163.60cm and 162.99cm respectively. Mean weight of cases was 61.60kg and control group was 61.01kg. Of 75 cases 33 were Right sided hernia ,32 were Left sided and 10 Bilateral inguinal hernia. Out of 65 unilateral cases 26 were having Direct inguinal hernia and 39 were Indirect hernia cases. Among the cases 5 had associated Hydrocele and 1 had Varicocele. The Interspinal distance (SS) Range among cases is 24.3 – 27.6. The Interspinal distance (SS) Range among controls is 22.2 -25.7. The mean Interspinal distance among cases was 29.61cm whereas in control group it was 23.89cm. The pubic tubercle segment (ST) range among cases is 7.3 – 8.0. The pubic tubercle segment (ST) range among controls is 6.9 – 7.8. The mean value of ST segment among cases is 7.657 which is significantly greater than the control group whose mean value is 7.332. 81.3% of cases and 14.7% of controls had ST line more than 7.5cm who belongs to low lying pubic tubercle group . 18.7% cases and 85.3% controls had ST line less than 7.5 belonging to high lying pubic tubercle group. The P value is less than 0.01 and is considered highly significant. A positive correlation was found among cases between height and ST line ($r= 0.563$). Positive correlation was also found between weight and ST line ($r= 0.448$) among cases.

Conclusion :

The present study shows that number of muscle and connective tissue variations in inguinal region depends upon the position of groin in relation to the inter spinal plane. The unusual origin of internal oblique muscle in those individuals is far away from the external half of the inguinal ligament leaving the deep ring unprotected during increased intra abdominal pressure and during abdominal wall muscle contraction which leads to development of Inguinal hernia. The longer the inguinal ligament, the larger the suprainguinal region and the larger Hessert's triangle which leads to less efficient shutter mechanism and hence the low lying pubic tubercle group of cases has more tendency to develop Inguinal hernia.

Keywords :

Inguinal hernia, Pubic Tubercle, Interspinal distance, pubic tubercle distance